

REMARKS/ARGUMENTS

Favorable reconsideration and allowance of the present application are respectfully requested in view of the following remarks. Claims 1-7 were pending prior to the Office Action.

A. SUMMARY OF THIS AMENDMENT

By the current amendment, Applicants basically editorially amend the specification, amend claim 1 and add new claims 8-20. Claims 1-20 are pending of which claims 1 and 8 are independent.

B. OBJECTION TO CLAIM 1

The Examiner objects to claim 1 for informalities. The claim is amended as the Examiner suggests. The amendment does not alter the claim scope in any significant manner. Applicants respectfully request that the objection to claim 1 be withdrawn.

C. PATENTABILITY OF THE CLAIMS

In the Office Action, the Examiner rejects claims 1-7 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Toyomura et al. (U.S. Patent No. 7,177,168). Applicants respectfully traverse.

Independent claim 1 recites, in part “an isolated operation output terminal provided on a path of a power supply line connecting said inverter

unit and said grid-connected output terminal, for outputting said alternating-current power, said isolated operation output terminal being a receptacle for connecting a load, the load being supplied with said alternating-current power.”

An example of this is illustrated in Fig. 1 of the present disclosure in which the isolation operation output terminal (e.g., load-connecting receptacle 10) is in the path of the power supply line connecting the inverter unit (e.g., inverter 4) and the grid-connected output terminal (e.g., plug 11). As seen, the load-connecting receptacle 10, and the plug 11 are on a common power supply line. This is unlike the prior art device illustrated Fig. 5 which illustrates that the commercial power 114 and the isolated load connecting extension receptacle 110 are on different supply lines.

In the Office Action, the Examiner correctly recognizes that Toyomura does not teach or suggest the above-recited feature. However, the Examiner alleges that the recited feature is within a routine skill of an artisan based on column 8, lines 33-46 of Toyomura. This reliance is misplaced.

Toyomura discloses six example arrangements of solar power generation apparatuses. All arrangements includes an inverter 107 having a boosting circuit 102, inverter circuit 103, control circuit 104, transforming circuit 105, switch 108, output connector 106, and system voltage detector 111. The output from the inverter 107 is connected to a system 110 through a panel board 109.

The relied-upon portion describes figures 5 and 6 showing the second arrangement. The inverter 107 of the second arrangement has an output cable with a 200-V plug 311 attached to its distal end and an output cable having a 100-V plug 312 attached. The plugs 311 and 312 can be connected to 200-V and 100-V wall sockets 314 and 313 corresponding to the shapes of the plugs. Like all other arrangements, the inverter 107 operates in interconnected operation mode when system voltages (200V and/or 100V) are detected on the plugs 311 and/or 312. *See c.7, 1.50 – c.8, 1.3.*

In column 8, lines 33-46, Toyomura indicates that the inverter 107 can have an output socket in the isolated operation mode such as when there is a power outage (no system voltages detected). Toyomura goes onto indicate that inverter 107 can be installed at arbitrary positions to supply alternating power to various loads when in isolated operation.

The Examiner mischaracterizes Toyomura. The portion only indicates that the inverter 107 can be positioned anywhere when in isolated operation. This is logical since in isolated operation, the inverter 107 is not required to be connected to the system – that is, the inverter 107 need not be located near sockets 314, 313 to connect the plugs 311 and/or 312 to the panel 109. For example, the inverter 107 can be moved from one house to another, from room to room within one house or building, and so on.

However, the freedom of movement of the inverter 107 itself is irrelevant to the placement of the unillustrated output socket amongst the components

that make up the inverter 107. The relied-upon portion of Toyomura provides no information indicating that the output socket can be on a power supply line common with the plugs 311, 312.

In fact, Toyomura suggests quite the opposite. Column 8, lines 33-46 states:

Although not illustrated, the inverter 107 may have an output socket in the isolated operation mode. In this case, upon detecting power outage, **the control circuit 104** outputs a gate off signal to a boosting circuit 102 and inverter circuit 103 and **cancels drive of the relay 204 or 205 to disconnect the inverter 107 from a system 110**. After that, the inverter circuit 103 is switched to the isolated operation mode and cancels the gate off signal. With this operation, alternating current power can be obtained from the output socket. *Emphasis added.*

As seen in figure 6, disconnecting relays 204, 205 isolates the power supply line connecting the plugs 311, 312 from the transforming circuit 105. Then to be able to obtain the alternating current power from the output socket, the output of the inverter circuit 103 must be diverted to the output socket by a completely different power supply line.

This is borne out in Toyomura's fifth and sixth arrangements (figures 10 and 11). These are the only arrangements in which two different outputs – one for interconnected operation and one for isolated operation – are provided. As seen in both figures, the first output section 407 connects the output of the inverter circuit 103 to system voltage 109 when switch 410 is turned on, and the second output section 406 connects the inverter circuit 103 to the plug unit 405 when switch 411 is turned on.

To execute isolated operation at the time of power outage, switch 411 is turned on when it is detected that the plug unit 405 is inserted into the second output section 406. *See c.13, ll.11-43*. Both figures 10 and 11 are no more than the prior art Fig. 5 of the present disclosure in which the commercial power 114 and the isolated load connecting extension receptacle 110 are on different supply lines.

In short, the relied-upon portion is deficient in providing information that would apprise one of ordinary skill regarding the placement of the isolated operation output terminal. Also, arrangements of Toyomura that actually do disclose placements of the output terminals for providing power for isolation operation disclose nothing more than what the stated prior art discloses – that of having the outputs for interconnected operation and isolated operation be provided on different supply lines. Simply put, Toyomura teaches away. *See KSR International v. Teleflex Inc.*, 550 U.S. ___, 127, S. Ct. 1727, 1742 (2007) (invention is more likely to be non-obvious when prior art teaches away).

Due to reasons stated above as well as others, independent claim 1 is distinguishable over Toyomura. Claims 2-7 are also distinguishable by virtue of their dependencies from claim 1 as well as on their own.

Applicants respectfully request that the rejection of claims 1-7 based on Toyomura be withdrawn.

D. NEW CLAIMS

Claims 8-20 are added in this Amendment. No new matter is presented. Applicants respectfully submit that the new claims are allowable over the prior art of record, and request that the new claims be allowed.

E. CONCLUSION

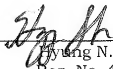
All objections and rejections raised in the Office Action having been addressed, it is respectfully submitted that the present application is in condition for allowance. Should there be any outstanding matters that need to be resolved, the Examiner is respectfully requested to contact Hyung Sohn (Reg. No. 44,346), to conduct an interview in an effort to expedite prosecution in connection with the present application.

The Commissioner is authorized to charge the undersigned's deposit account #14-1140 in whatever amount is necessary for entry of these papers and the continued pendency of the captioned application.

Respectfully submitted,

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By: _____



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